dependent on whether the portable transceiver is stationary or moving,

(b) upon termination of a transmission of each of said data packets, opening a time window for receiving a transmission from the reader and enabling reception of a message therein, and

(c) upon termination of said time window, disabling reception of data.

2. **(Amended)** The method according to Claim 1, wherein:

B2 Cont.

the portable transceiver is one of a plurality of portable transceivers each worn by a person to whom a short message is to be transmitted and each having a respective unique ID and being able to effect autonomous transmission to the reader, and

in step **(a)** each portable transceiver transmits for a negligible fraction of its duty cycle thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

3. **(Amended)** The method according to Claim 1, wherein:

the portable transceiver is one of a plurality of portable transceivers each worn by a person to whom a short

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message is to be transmitted and each having a respective unique ID and being able to effect autonomous transmission to the reader, and

in step **(a)** each portable transceiver has a randomly variable duty cycle thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

4. (Amended) A method for use with a data communications network comprising a server connected to a plurality of readers in order to send a message using IR data communication to a portable transceiver operating according to claim 1, said method comprising the following steps carried out by at least one of said readers:

(a) awaiting receipt of a transmission from said portable transceiver of a data packet, and

(b) sending the message to the portable transceiver from the respective reader in communication with the portable transceiver during a time window opened thereby so as to be dependent on the transmission from the portable transceiver for allowing communication therewith.

5. (Amended) The method according to Claim 4, wherein the message is sent via the server and there are further included the step of:

locating the respective reader in communication with the portable transceiver, and

sending the message from the server to the respective reader for onward transmission to the portable transceiver.

7.

6. **(Amended)** A portable transceiver adapted for bi-directional IR data communication with a reader, the portable transceiver comprising:

B2 Cont.

a motion sensor for producing a motion detect signal upon movement of the portable transceiver,

a transmitter coupled to the motion sensor for transmitting successive data packets to the reader at a rate that is dependent on whether the portable transceiver is stationary or moving;

a timer responsive to termination of a transmission of each of said data packets, for opening a time window for receiving a transmission from the reader, and

a receiver for receiving messages only during said time window.

8.

7 **(Amended)** The portable transceiver according to Claim 6, including a micro-controller for controlling the transmitter to transmit for a negligible fraction of a duty cycle thereof, thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

9. 8. **(Amended)** The portable transceiver according to Claim 7 6, including a micro-controller being adapted to randomly vary a duty cycle of the transmitter thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

11. 9. **(Amended)** A reader for sending a message using IR data communication to a portable transceiver, said reader comprising:

B2 Cont.

a receiver for receiving a transmission of a data packet from the portable transceiver, and

a transmitter for sending the message to the portable transceiver during a time window opened thereby;

wherein the transmitter is responsive to the received data packet from the portable transceiver for sending said message and is thus incapable of initiating autonomous communication with the portable transceiver.

15. 10. **(Amended)** In the system according to Claim 14 13, a method for communicating between a reader and a portable transceiver, said method comprising the following steps carried out by the server:

(a) locating a respective one of said readers in communication with the portable transceiver, and

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(b) redirecting the message to the respective reader for onward transmission to the portable transceiver during a time window opened thereby.

Please add the following claims:

6. ~~11~~. **(New)** The method according to Claim 1, further including randomly varying initiation of said transmission within a duty cycle of the transmitter thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

10. ~~12~~. **(New)** The portable transceiver according to Claim 9 ~~8~~, wherein the micro-controller is adapted to randomly vary initiation of said transmission within said duty cycle of the transmitter thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

12. ~~13~~. **(New)** The reader according to Claim 11 ~~9~~, further including:

a signal strength indicator and detector for measuring a received signal strength,

a noise subtract unit coupled to the signal strength indicator and detector,

a noise integrator coupled to an output of the signal strength indicator and detector for producing a noise signal representative of average noise,

a summing amplifier having a first input coupled to an output of the noise integrator and having a second input coupled to a noise threshold for producing at an output thereof an output signal corresponding to the sum of the average noise and the noise threshold,

B3 cont.

a comparator having an inverting input coupled to the output of the summing amplifier and a non-inverting input coupled to the signal strength indicator and detector for producing an output signal only if the received signal strength exceeds the sum of the average noise and the noise threshold.

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14. **(New)** The reader according to Claim 9, further including:

a peak detector coupled to the signal strength indicator and detector for measuring a peak value of the signal strength,

a summing amplifier having a first, summing input coupled to the output of the peak detector and having a second, subtracting input connected to a noise threshold for producing at an output of the summing amplifier a signal corresponding to the difference between the peak value of the RSSI signal and the threshold,

a comparator having an inverting input coupled to the output of the summing amplifier and having a non-inverting input coupled to the amplifier and detector for producing at an output thereof an output signal only if the signal strength of the received signal exceeds the difference between the peak value of the received signal strength and the threshold, and

a deglitcher coupled to the output of the comparator for suppressing any pulse whose time duration is less than a predetermined time period and thus constitutes spurious glitches rather than actual data.

B3 cont.

14.

~~15~~. **(New)** A system comprising:

a plurality of portable transceivers adapted for bi-directional IR data communication with a reader;

each portable transceiver comprising:

a motion sensor for producing a motion detect signal upon movement of the portable transceiver,

a transmitter coupled to the motion sensor for transmitting successive data packets to the reader at a rate that is dependent on whether the portable transceiver is stationary or moving;

each reader comprising:

a receiver for receiving a transmission of a data packet from the portable transceiver, and

a transmitter for sending the message to the portable transceiver during a time window opened thereby;

wherein each portable transceiver further comprises:

a timer responsive to termination of a transmission of each of said data packets, for opening a time window for receiving a transmission from the reader, and

a receiver for receiving messages only during said time window;

the transmitter in each reader is responsive to the received data packet from the portable transceiver for sending said message and is thus incapable of initiating autonomous communication with the portable transceiver; and

a server is connected to the readers and is adapted to receive and monitor the transmissions of the portable transceivers.

B cont.

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16. (New) In the system according to Claim 10, a method for communicating between a reader and a portable transceiver, said method comprising the following steps:

(a) the portable transceiver initiating transmissions of successive data packets to the reader at a rate that is dependent on whether the portable transceiver is stationary or moving, said data packets including an acknowledge signal where

appropriate for acknowledging receipt of a message from the reader during a preceding communication cycle,

(b) upon termination of a transmission of each of said data packets, the portable transceiver opening a time window for receiving a message from the reader and enabling reception of data therein,

(c) upon termination of said time window, the portable transceiver disabling reception of data so as to conserve battery power, decoding said message and, if necessary, executing any instructions embedded in said message,

(d) upon receipt of a data packet from the portable transceiver by one of the readers, the reader decoding the data packet and conveying to the server,

(e) if a message is to be conveyed to the portable transceiver, the reader transmitting said message within said time window so as to be received by the portable transceiver,

(f) reverting to "receive" mode upon termination of said time window for receiving subsequent data packets from the portable transceiver.

17. **(New)** The method according to Claim 16, wherein in step **(a)** there is included the step of:

adapting each portable transceiver to transmit for a negligible fraction of its duty cycle thereby reducing a

likelihood that two or more portable transceivers will try to transmit simultaneously.

18. **(New)** The method according to Claim 16, wherein in step **(a)** there is included the step of:

adapting each portable transceiver to transmit for a randomly variable duty cycle thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

19. **(New)** The method according to Claim 16, wherein in step **(a)** there is included the step of:

adapting each portable transceiver to initiate said transmission at a randomly varying time within a duty cycle of the transmitter thereby reducing a likelihood that two or more portable transceivers will try to transmit simultaneously.

REMARKS

The Official Action of October 9, 2001, Paper No. 7, and the sole citation relied upon have been carefully reviewed. The claims in the application are now claims 1-19, and these claims define patentable subject matter warranting their allowance. Applicants consequently request favorable reconsideration and allowance.